

Siglec-1 (B-1): sc-398109

BACKGROUND

Two families of mammalian lectin-like adhesion molecules, the selectins and the sialoadhesins, bind glycoconjugate ligands in a sialic acid-dependent manner. The sialic acid-binding immunoglobulin superfamily lectins, designated siglecs or sialoadhesins, are immunoglobulin superfamily members that recognize sialylated ligands. The common sialic acids of mammalian cells are N-acetylneuraminic acid (Neu5Ac) and N-glycolylneuraminic acid (Neu5Gc). The human Siglec-1 gene maps to chromosome 20p13 and encodes a 1,709 amino acid protein, also known as CD169. Alternative splicing of the Siglec-1 gene produces a variant, encoding a type I transmembrane protein isoform that is soluble rather than membrane-bound. Studies have shown human Siglec-1 has greater affinity for Neu5Ac over Neu5Gc. Siglec-1 is a sialic acid-binding receptor that is expressed in hemopoietic cells. It mediates local cell-cell interactions in lymphoid tissues and can be detected at contact points of macrophages with other macrophages, sinus-lining cells and reticulum cells.

REFERENCES

1. Brinkman-Van der Linden, E.C., et al. 2000. New aspects of siglec binding specificities, including the significance of fucosylation and of the sialyl-Tn epitope. Sialic acid-binding immunoglobulin superfamily lectins. *J. Biol. Chem.* 275: 8625-8632.
2. Brinkman-Van der Linden, E.C., et al. 2000. Loss of N-glycolylneuraminic acid in human evolution. Implications for sialic acid recognition by siglecs. *J. Biol. Chem.* 275: 8633-8640.
3. Schadee-Eestermans, I.L., et al. 2000. Ultrastructural localisation of sialoadhesin (Siglec-1) on macrophages in rodent lymphoid tissues. *Immunobiology* 202: 309-325.

CHROMOSOMAL LOCATION

Genetic locus: SIGLEC1 (human) mapping to 20p13; Siglec1 (mouse) mapping to 2 F1.

SOURCE

Siglec-1 (B-1) is a mouse monoclonal antibody raised against amino acids 42-97 mapping near the N-terminus of Siglec-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Siglec-1 (B-1) is available conjugated to agarose (sc-398109 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398109 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398109 PE), fluorescein (sc-398109 FITC), Alexa Fluor® 488 (sc-398109 AF488), Alexa Fluor® 546 (sc-398109 AF546), Alexa Fluor® 594 (sc-398109 AF594) or Alexa Fluor® 647 (sc-398109 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398109 AF680) or Alexa Fluor® 790 (sc-398109 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Siglec-1 (B-1) is recommended for detection of Siglec-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Siglec-1 siRNA (h): sc-72064, Siglec-1 siRNA (m): sc-72067, Siglec-1 shRNA Plasmid (h): sc-72064-SH, Siglec-1 shRNA Plasmid (m): sc-72067-SH, Siglec-1 shRNA (h) Lentiviral Particles: sc-72064-V and Siglec-1 shRNA (m) Lentiviral Particles: sc-72067-V.

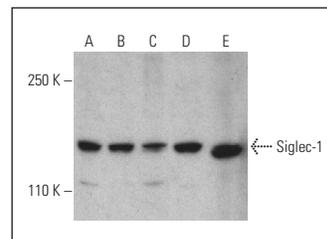
Molecular Weight of Siglec-1: 185 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, THP-1 cell lysate: sc-2238 or BYDP whole cell lysate: sc-364368.

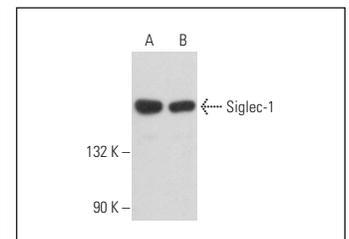
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Siglec-1 (B-1) HRP: sc-398109 HRP. Direct western blot analysis of Siglec-1 expression in Jurkat (A), THP-1 (B), K-562 (C), ALL-SIL (D) and BYDP (E) whole cell lysates.



Siglec-1 (B-1): sc-398109. Western blot analysis of Siglec-1 expression in Jurkat (A) and THP-1 (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.